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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/535,493	05/18/2005	Colin J West	540-563	3929
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NIXON & VANDERHYE, PC 901 NORTH GLEBE ROAD, 11TH FLOOR ARLINGTON, VA 22203			EXAMINER GOFF II, JOHN L	
			ART UNIT 1733	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/535,493

Applicant(s)

WEST ET AL.

Examiner

John L. Goff

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 May 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 May 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>5/18/05</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

1. Claim 2 is objected to because of the following informalities: In claim 2 line 1 delete "a". Appropriate correction is required.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 24 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

4. Claim 24 requires "A method of assembling components together in sealed relationship substantially as herein described". It is unclear what is required by the claim as no method steps are required. It is unclear what is required by "substantially as herein described". The claim is interpreted as merely requiring components assembled together in a sealed relationship.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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6. Claims 22-24 are rejected under 35 U.S.C. 102(b) as being anticipated by John et al. (U.S. Patent 3,022,870).

John et al. disclose an assembly which forms part of a fuel storage system for an aircraft which comprises two components sealed together in a fluid-tight relationship each component having a mating surface for sealing to a mating surface of the other component wherein both mating surfaces have a layer of cured polysulphide sealant thereon (the Figure and Column 1, lines 10-20 and Column 2, lines 63-72 and Column 3, lines 1-23 and Column 4, lines 41-57).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

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9. Claims 1-10, 14(1-10), 20, and 21-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over John et al. in view of any one of Cheron (FR 2498671), Ishiara et al. (JP 11072999), Hanson (U.S. Patent 4,697,970), or Fournier et al. (U.S. Patent 4,106,184) and Nakamura et al. (JP 03292796).

John et al. disclose a method of assembling components together which form part of a fuel storage system for an aircraft comprising providing two components each component having a mating surface for sealing to a mating surface of the other component, applying a cured polysulphide sealant to at least one of the mating surfaces, and bringing together the mating surfaces and applying a predetermined pressure therebetween for a predetermined period whereby to bring about a sealed fluid-tight joint between the two mating surfaces (the Figure and Column 1, lines 10-20 and Column 2, lines 63-72 and Column 3, lines 1-23 and Column 4, lines 41-57). John et al. teach the cured polysulphide sealant is applied to at least one of the mating surfaces by forming a sealant film between two protective coverings, curing the polysulphide sealant, removing the protective coverings, and then applying the sealant film. John et al. are silent as to applying the polysulphide sealant directly to at least one of the mating surfaces without first forming a sealant film. However, it is well taken in the art that there are two functionally equivalent techniques available for providing an adhesive/sealant between the mating surfaces of components which include providing the adhesive/sealant as a film between two protective coverings or directly coating at least one of including both of the mating surfaces with the adhesive/sealant as shown by any one of Cheron, Ishiara et al., Hanson, or Fournier et al. (See the abstracts of Cheron and Ishiara et al., and Column 5, lines 37-42 of Hanson and Column 5, lines 48-51 of Fournier et al.). Furthermore, as shown by Nakamura et al. it is known

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to apply adhesive/sealant to the mating surface of each component, cure the adhesive/sealant, and then bring together the mating surfaces (See the abstract). It would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the polysulphide sealant as taught by John et al. to both mating surfaces using either of the functionally equivalent techniques for applying an adhesive/sealant as shown by any one of Cheron, Ishiara et al., Hanson, or Fournier et al. and Nakamura et al. wherein directly coating both mating surfaces with the sealant has the advantage of not requiring a separate step of forming a sealant film, it being noted directly following the application the sealant would be allowed to cure as required by John et al. and specifically shown by Nakamura et al.

Regarding claims 3-10, John et al. teach the application of pressure may be performed by bolting together the two components in their final assembled configuration (Column 3, lines 15-23). John et al. are silent as to the specific heating temperature, pressure, and time for applying the pressure. However, John et al. teach the sealant when pressed is not completely cured and the adhesion gradually increases over time (Column 3, lines 12-15 and 48-67). John et al. also note heat may be applied to the sealant to speed the cure (Column 2, lines 71-72 and Column 3, lines 1-4). Absent any unexpected results, it would have been obvious to one of ordinary skill in the art at the time the invention was made to experimentally determine the heating temperature, pressure, and time for applying the pressure to complete the joint of the two components as taught by John et al. as a function of forming an assembly of a sealed fluid-tight joint to be used as part of a fuel storage system for an aircraft as doing so would have required nothing more than ordinary skill and routine experimentation.

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Regarding claim 14(1-10), John et al. teach the cured polysulphide sealant film is provided as stored between two protective coverings. There is no specific teaching in John et al. as modified by any one of Cheron, Ishiara et al., Hanson, or Fournier et al. and Nakamura et al. that the components having a layer of cured polysulphide sealant thereon include a protective covering. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include on the cured polysulphide sealant taught by John et al. as modified by any one of Cheron, Ishiara et al., Hanson, or Fournier et al. and Nakamura et al. a protective covering as was known in John et al. such that the components having a layer of cured polysulphide sealant thereon may be stored prior to use.

10. Claims 11-13, 14(11-13), and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over John et al., any one of Cheron, Ishiara et al., Hanson, or Fournier et al., and Nakamura et al. as applied to claims 1-10, 14(1-10), 20, and 21-24 above, and further in view of Smith et al. (U.S. Patent 3,659,896).

John et al., any one of Cheron, Ishiara et al., Hanson, or Fournier et al., and Nakamura et al. as applied above teach all of the limitations in claims 11-13, 14(11-13), and 15 except for a teaching of applying the polysulphide sealant to painted mating surfaces. Smith et al. disclose a method of assembling components together comprising providing two components each component having a mating surface for sealing to a mating surface of the other component, applying a cured polysulphide sealant to at least one of the mating surfaces, and bringing together the mating surfaces and applying a predetermined pressure therebetween for a predetermined period whereby to bring about a sealed fluid-tight joint between the two mating surfaces (Column 9, lines 48-58 and Column 10, lines 51-75). Smith et al. teach at least one of

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the mating surfaces may be painted such as for a painted automobile body wherein as there are no disclosed steps for treating the painted bodies such that Smith et al. is considered to teach applying the polysulphide sealant immediately after the paint has dried (Column 2, lines 73-75 and Column 11, lines 6-20). It would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the polysulphide sealant as taught by John et al. as modified by any one of Cheron, Ishiara et al., Hanson, or Fournier et al., and Nakamura et al. to painted mating surfaces of the components which form part of an aircraft body as it was known to use polysulphide sealants on painted automobile body components as shown by Smith et al. such that the components may be sealed in their final configuration as taught by John et al.

11. Claims 16-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over John et al. and any one of Cheron, Ishiara et al., Hanson, or Fournier et al. and Nakamura et al. as applied to claims 1-10, 14(1-10), 20, and 21-24 above, and further in view of Akmal et al. ("Handbook of Adhesive Technology" pp. 319-327).

John et al., any one of Cheron, Ishiara et al., Hanson, or Fournier et al., and Nakamura et al. as applied above teach all of the limitations in claims 16-19 except for a teaching of the polysulphide sealant including transition metal oxide, manganese dioxide, or dichromate curing compound, it being noted John et al. are not limited to any particular curing compound and appear to suggest an organic-cure compound (Column 3, lines 48-55). It is extremely well known to cure polysulphide sealants with any of transition metal oxide, manganese dioxide, dichromate, or organic-cure curing compounds as shown by Akmal et al. (Page 323, second full paragraph). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use as the curing compound in John et al. as modified by any one of

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Cheron, Ishiara et al., Hanson, or Fournier et al., and Nakamura et al. any of the extremely well known curing compounds for polysulphide sealant including transition metal oxide, manganese dioxide, dichromate, or organic-cure curing compounds as shown by Akmal et al. only the expected results being achieved.

Double Patenting

12. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

13. Claims 22-24 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1 and 22 of copending Application No. 11/020,873. Although the conflicting claims are not identical, they are not patentably distinct from each other because claims 22-24 are fully encompassed by claims 1 and 22 of copending Application No. 11/020,873.

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This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Conclusion

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **John L. Goff** whose telephone number is **(571) 272-1216**. The examiner can normally be reached on M-F (7:15 AM - 3:45 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on (571) 272-1226. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



John L. Goff
Patent Examiner
Art Unit 1733